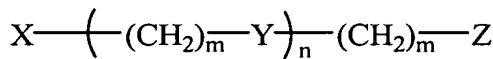


WHAT IS CLAIMED IS:

1. A compound having the formula



3. in which:

4. m is 1 to 6;

5. n is 1 to 20;

6. when n is 2 or greater, either all Y is the same or Y differs among different

7. $(-\text{CH}_2 - \text{Y} -)$ groups; and

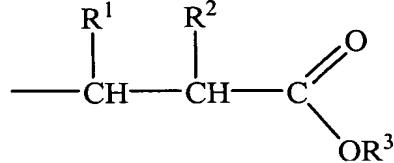
8. X, Y, and Z are independently selected from the group consisting of amine groups and

9. guanidine groups such that at least one group represented by X, Y, and Z, but

10. not all, is a guanidine group; and

11. at least one amine group represented by X, Y, and Z is substituted with at least one

12. carboxylate substituent having the formula



14. in which:

15. R^1 is a member selected from the group consisting of H, C_{1-4} alkyl, $\text{C}(\text{O})\text{OH}$,
16. $\text{C}(\text{O})\text{O}-(\text{C}_{1-4} \text{ alkyl})$, $(\text{C}_{1-4} \text{ alkylene})-\text{C}(\text{O})\text{OH}$, and $(\text{C}_{1-4} \text{ alkylene})-\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$
17. alkyl);

18. R^2 is a member selected from the group consisting of H, C_{1-4} alkyl, $\text{C}(\text{O})\text{OH}$,
19. $\text{C}(\text{O})\text{O}-(\text{C}_{1-4} \text{ alkyl})$, $(\text{C}_{1-4} \text{ alkylene})-\text{C}(\text{O})\text{OH}$, and $(\text{C}_{1-4} \text{ alkylene})-\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$
20. alkyl); and

21. R^3 is a member selected from the group consisting of H and C_{1-4} alkyl.

1. 2. The compound of claim 1 wherein:

2. R^1 is a member selected from the group consisting of H, CH_3 , $\text{C}(\text{O})\text{OH}$, $\text{C}(\text{O})\text{OCH}_3$,
3. $\text{CH}_2\text{C}(\text{O})\text{OH}$, and $\text{CH}_2\text{C}(\text{O})\text{OCH}_3$;

4. R^2 is a member selected from the group consisting of H, CH_3 , $\text{C}(\text{O})\text{OH}$, $\text{C}(\text{O})\text{OCH}_3$,
5. $\text{CH}_2\text{C}(\text{O})\text{OH}$, and $\text{CH}_2\text{C}(\text{O})\text{OCH}_3$; and

6. R^3 is a member selected from the group consisting of H and CH_3 .

1. 3. The compound of claim 1 wherein m is 1 to 3.

1 4. The compound of claim 1 wherein m is 2 and n is 1 to 10.

1 5. The compound of claim 1 wherein m is 2 and n is 1 to 6.

1 6. The compound of claim 1 wherein m is 2 and n is 4.

1 7. A composition of matter comprising a plurality of compounds of claim
2 1 differing in the number of said carboxylate substituents per molecule.

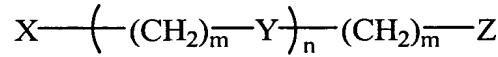
1 8. A composition of matter comprising a plurality of compounds of claim
2 1 differing in the number of guanidine groups per molecule.

1 9. A kit for performing isoelectric focusing, comprising a plurality of
2 compounds of claim 1 having isoelectric points ranging from about 3.0 to about 13.0.

1 10. A kit for performing isoelectric focusing, comprising a plurality of
2 compounds of claim 1 having isoelectric points ranging from about 8.0 to about 13.0.

1 11. A kit for performing isoelectric focusing, comprising a plurality of
2 compounds of claim 1 having isoelectric points ranging from about 9.0 to about 12.0.

1 12. In a method for separating components of a sample according to
2 isoelectric point, said method comprising imposing an electric potential across an
3 electrophoresis medium loaded with said sample, said electrophoresis medium having
4 suspended therein a plurality of carrier ampholytes distributed throughout said medium
5 according to isoelectric point to form a pH gradient therein, the improvement in which said
6 carrier ampholytes are compounds having the formula



7 in which:

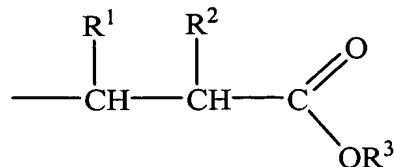
8 m is 1 to 6;

9 n is 1 to 20;

10 when n is 2 or greater, either all Y is the same or Y differs among different
11 $(-\text{CH}_2)_m \text{---} Y \text{---})$ groups; and

12 X, Y, and Z are independently selected from the group consisting of amine groups and
13 guanidine groups such that at least one group represented by X, Y, and Z is a
14 guanidine group; and

16 at least one amine group represented by X, Y, and Z is substituted with at least one
17 carboxylate substituent having the formula



19 in which:

20 R^1 is a member selected from the group consisting of H, C_{1-4} alkyl, $\text{C}(\text{O})\text{OH}$,
21 $\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$ alkyl), $(\text{C}_{1-4}$ alkylene)- $\text{C}(\text{O})\text{OH}$, and $(\text{C}_{1-4}$ alkylene)- $\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$
22 alkyl);

23 R^2 is a member selected from the group consisting of H, C_{1-4} alkyl, $\text{C}(\text{O})\text{OH}$,
24 $\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$ alkyl), $(\text{C}_{1-4}$ alkylene)- $\text{C}(\text{O})\text{OH}$, and $(\text{C}_{1-4}$ alkylene)- $\text{C}(\text{O})\text{O}-(\text{C}_{1-4}$
25 alkyl); and

26 R^3 is a member selected from the group consisting of H and C_{1-4} alkyl.

1 13. The method of claim 12 wherein m is 1 to 3.

1 14. The method of claim 12 wherein m is 2 and n is 1 to 10.

1 15. The method of claim 12 wherein m is 2 and n is 1 to 6.

1 16. The method of claim 12 wherein m is 2 and n is 4.

1 17. The method of claim 12 wherein:

2 m is 2;

3 n is 1 to 6;

4 R^1 is a member selected from the group consisting of H, CH_3 , $\text{C}(\text{O})\text{OH}$, $\text{C}(\text{O})\text{OCH}_3$,
5 $\text{CH}_2\text{C}(\text{O})\text{OH}$, and $\text{CH}_2\text{C}(\text{O})\text{OCH}_3$;

6 R^2 is a member selected from the group consisting of H, CH_3 , $\text{C}(\text{O})\text{OH}$, $\text{C}(\text{O})\text{OCH}_3$,
7 $\text{CH}_2\text{C}(\text{O})\text{OH}$, and $\text{CH}_2\text{C}(\text{O})\text{OCH}_3$; and

8 R^3 is a member selected from the group consisting of H and CH_3 .

1 18. The method of claim 12 wherein said pH gradient extends from about
2 3.0 to about 13.0.

1 19. The method of claim 12 wherein said pH gradient extends from about
2 8.0 to about 13.0.